NEWCOMEN
The International Society for the History of Engineering and Technology

Newcomen Society, South Yorkshire

Meeting Programme September 2022 - May 2023

Meetings are held at Kelham Island Museum, Alma Street, Sheffield S3 8RY, between 6.30 pm – 8.15 pm unless otherwise indicated. Meetings are free and visitors are always welcome.

Autumn 2022

Monday 26th September 6:30 pm – John Moyle - Reverse Engineering

This meeting is currently being offered as an **in-person** only event and booking is not required.

> Reverse engineering, sometimes called "back engineering", is a process in which, machines, weapons, architectural structures, software, and other products are "deconstructed" to extract design information from them. Often, reverse engineering involves deconstructing individual components of larger objects. Strictly, anatomy, physiology and histopathology could also be included.
> Reverse engineering may be done in a number of guises and for many reasons: ethical, and immoral; civil or military; investigation of failure; history or just plain inquisitiveness!
> This talk discusses these varied reasons and the vast range of skills, disciplines and techniques required. I will be mentioning examples from antiquity up to printed and integrated circuits. I will not be discussing the so-called reverse engineering of soft/firmware which is mainly unethical and illegal and beyond me!

Tuesday 25th October 2:00 pm – 8:00 pm Geoff Horseman - A History of Parsons Turbines
Free ½ Day Event

BOOKING IS ESSENTIAL as demand for both **in-person** and **online** places is expected to be high.
Link for bookings - https://www.eventbrite.co.uk/e/a-history-of-parsons-turbines-tickets-406742446607
People are free to attend either or both of the talks.

This is a free 1/2 day event starting at **2:00 pm** at which Geoff will give two talks outlining the development and history of turbines with particular reference to the work of Parsons.

> **Program**
> **2:00 pm to 2:45 pm** Opportunity to view Parsons's No 4 turbine that is held by Kelham.
>
> **3:00 pm** Welcome and a brief outline as to how Kelham became home to Parsons's No 4 turbine.
>
> **3:15 pm Parsons and Pametrada marine turbines in the great liners**
>
> This talk will outline the evolution of Parsons and Pametrada's most powerful marine steam turbines from the Mauretania and Lusitania via the Titanic, Aquitania, Île de France, Empress of Britain, Bremen, Europa, Queen Mary and Windsor Castle to the QE2. The creation of Pametrada which produced the engine designs for Britain's most prominent shipyards to build - including John Brown, Harland and Wolff, Cammell Laird, Vickers Armstrong, Swan Hunters, etc - will also be described. There will be insights into passenger life onboard the ships as well as the engines.
>
> **4:30 pm Break -** whilst tea and coffee will be available in the room attendees looking for something more substantial will need to retire to the onsite café or one of the nearby restaurants.
>
> **5:45 pm Film "Makers of Power"**
>
> **6:00pm The evolution of the Parsons land steam turbine**

This talk will describe how the turbines produced for power station use changed from the World's first turbine-generator of 1884 up until the time Parsons became part of Siemens in 1997. The keynote designs will be discussed including the machines for Calder Hall (the World's first commercial nuclear power station), Drax (Britain's largest power station) and Nanticoke (the largest coal fired power station in North America). Reference will be made to the Kelham Island turbine-generator in this talk.

8:00pm Closing Remarks

Monday 21st November 6:30 pm - Professor Rod Smith - A short history of societal response to major accidents: from laissez-faire to the safety case

This talk will be available **in-person** and **online** and booking details will be provided nearer the time.

This talk will attempt to follow the long history of both public and government responses to accidents. Since Victorian times public alarm has not always been matched by government action, but the several decades have seen the safety case embedded as a feature of major industries and individual activities. It is ironic that the seminal 1972 Robens report, which led to the Health & Safety at Work Act of 1974, was authored by the person who as Chair of the National Coal Board behaved in an abject fashion in the aftermath of the disaster at Aberfan in October 1966. The most interesting debates are frequently between the cost of a life saved and the, often false, perception of risk in the minds of the public. This latter aspect is a demanding challenge of social science as is the near ubiquitous perception that nearly any common everyday activity can be restricted on “Health & Safety” grounds.

Monday 12th December 7:00 pm - Lesley Taylor and Shirley Levon - John Smeaton and The Calder Navigation

Joint meeting with the South Yorkshire Industrial History Society (Note slightly later start time)

This talk will be available **in-person** and **online** and booking details will be provided nearer the time.

This talk will explore the background to the factors that lead to the River Calder being made navigable above Wakefield, and will cover the first four years of construction,1760-63, when John Smeaton, the engineer-in-chief wrote a weekly journal. This has been used as the basis of the talk (and our book) in combination with many other source materials such as plans, letters, minutes, accounts, Acts of Parliament and Parliamentary Journals.

It will outline the many years before the scheme gained Parliamentary approval, the people who drove the scheme forward, and the conflicts and disappointments they faced. The practical requirements will be brought into sharp focus: the planning, negotiating and financing, and the sourcing of labour, materials and equipment. As the work gradually progressed the story is often of difficulties faced on this volatile river and the disagreements which these setbacks caused.

Winter / Spring 2023

Monday 23rd January 6:30 pm - Ian McKay - Things that go "Bang" in the night - A Short History of Industrial Explosives

Monday 20th February 6:30 pm - Nina Baker - Women in Electrical and Electronic Engineering

Monday March - joint meeting with SMEA dates and details to follow

Monday 24th April 6:30 pm - Victoria Owens - Lady Charlotte Guest and Dowlais Ironworks

Monday 22nd May 6:30 pm - Chris Henderson - Warships to Spaceships - The Life and Work of Sir Barnes Wallis

Travel to Kelham Island
For directions to Kelham Island Museum please visit:- http://www.simt.co.uk/find-us
For further information please contact John Suter on:- meetings.syorks@newcomen.com